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                                                                                                                                                                                                                                                                                                                                                                                                            HSU63743 2740 bp mRNA linear PRI Homo sapiens mitotic centromere-associated kinesin mRNA, cds.
                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (Dases 1 to 2740)

Kim,I.G.; Juo,D.Y., Sohn,U. and Kim,Y.H.

Cloning and expression of human mitotic centromere-associated kinesin gene
hiochim. Biophys. Acta 1359 (3), 181-186 (1997)
                                                                                                                                                                                                                                                                                         063743
                                                                                                                    Kim, I.G., Jun, D.Y. and Kim, Y.H. Direct Submission Submistion (12-JUL-1996) Microbiology, University, Taegu 702-701, Korea
                                                                                                                                                                                                                                                Homo sapiens
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                                         /cell
                                                         /organism-"Homo sapiens"
/db_xref-"taxon:9606"
/clone-"E6-1"
/cell_line-"Jurkat"
                                                                                                                                                                                                                                                                                GI:1695881
/note="HisMCAK"
/codon_start=1
/product="mitotic centromere-associated
/protein_id="AAC27660.1"
                                                                                                   1. .2740
                                                                                                        Location/Qualifiers
                                                 type-"T lymphocyte"
                                                                                                                                Kyungpook National
             kinesin
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                                                                                                                                                                                                                                                                                                                                                                           CAGGAAAATGTAACAATCCAGAAACAAAAACGGAGATCCGTCAACTCCAAAATTCCTGCT
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                                                                                                            ttttcagttcctcctgccccactaggccttcctgccctgcagtggctgaaataccattg
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WAEGGATRÖKE LOPDDVAAINPELLQILPLHERDNLE PQERVTIQROKRRSVNSKIPA
PKESLRSRSTRMSTYSELRITAQEENDHEVELLPAANSRKQFSVPPAPERSCPAVAEI
PLRAVSEEMEEQVISI IRGSSSANPVNSVRKSCLVKEVERKHKKREEKKAQNSEMRK
RAQBYDSSPPNAPERARMIKEFRATLECHPLTYNDPIEEHTICVCVRKRPLURQELAKK
RAQBYDSSPPNAPERARMIKEFRATLECHPLTYNDDPIEEHTICVCVRKRPLURQELAKK
EIDVSSPRAMCCFAVGOTGSGRTHTWGGDLSGKAQNASKGIYAMASRDVYELKROPCYRK
LIGLEVYVTFFEIYRGKLEDLLAKKKLEVLEDGKQQVQVVGLOEHLVNSADDVIKHLD
MGSACRTSGGTFANSNSSRSHACFQIILAKKGRHHGKFSLVDLAGHERGADTSSADD
MGSACRTSGGTFANSNSSRSHACFQIILAKGRHGKFSLVDLAGHERGADTSSADD
MGSACRTSGGTFANSNSSRSHACFQIILAKGRHGKFSLVDLAGHERGADTSSADD
MGSACRTSGGTFANSNSSRSHACFQIILAKGRHGKFSLVDLAGHERGADTSSADR
TRHEGAEIHKSLLAKKECIRALQQNKAHFFPFRESKLTQVLRSFIGEBSRTCMIATIS
PGISSCEYTLNTLRYADRYKELSPHSGBSGEOLIQHETEERKACSHCALIFGNLSKEE
EELSSQMSSRNEAMTQITRELEEKAMEELKEITQOGPDWLELSEMTEQPDYDLETFVNK
AESALAQQAKHFSALRDVIKALRLAMQLEEQASRQISSKKRPQ**
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| 6    |   | 1801 | DЬ        |
|------|---|------|-----------|
| 860  | acagggtcaaggagctgagcccccacagtgggcccagtggagagcagttgattcaaat                | 1801 | Ŷ         |
| 0    | GCCACGATCTCACCAGGCATAAGCTCCTGTGAATATACTTTAAACACCCTGAGATATGCA              | 1741 | В         |
| 90   | ccacgatctcaccaggcataagctcctgtgaatatactttaaacaccctgagatatgca               | 1741 | <b>%</b>  |
| 7    | AGCTGACACAGGTGCTGAGGGACTCCTTCATTGGGGAGAACTCTAGGACTTGCATGATT 1             | 1681 | 탕         |
| 2 6  | tgacacaggtgctgagggactccttcattggqgagaactctaggagttgcatgcatr                 | 1681 | Q         |
| 680  |   |      | ₽.        |
| 6.2  | tabbaaatacatcaanaacacataaaaaaaaaaaaaaaaa                                  | Ön   | Ç.        |
| 62   |   | is i | ₽ .       |
|      | AATGCATGGCAAGTTCTCTTTGGTAGATCTGGCAGGGAATGAGCGAGGCGCAGACAC                 | 1561 | Q 5       |
| 1560 | agaatgcatggcaagttctctttggtagatctggcagggaatgagcgaggcgagacact               | , ,  | \$ 5      |
| 1500 | CANCTCCAATTCCTCCCGCTCCCACGCGTGCTTCCAAATTATTCTTCGAGCTAAAAGGG               |      | , B       |
| 50   | ctcccgctcccacgcgtgcttccaaattattcttcgagctaaaggg                            | 1441 | Ş         |
| \$ : | GATGATGTCATCAAGATGCTCGACATGGGCAGCGCCTGCAGAACCTCTGGGCAGACATTT              | 1381 | Db        |
| 4    | atgatgtcatcaagatgctcgacatgggcagcgcctgcagaacctctgggcagacattt               | 1381 | Oy        |
| 1380 | GAGGACGGCAAGAGGTGCAAGTGGTGGTGGGGCTGCAGGAGCATCTGGTTAACTCTGCT               | 1321 | ర్జ       |
| ا 20 | aggacggcaagcaacaggtgcaagtggtggggctgcaqqaqcatctqqttaactctqct               | 1321 | Qy        |
| 32   | GAGATCTACAATGGGAAGCTGTTTGACCTGCTCAACAAGAAGGCCAAGCTGCGCGTGCTG              | 1261 | ₽         |
| 2    | agatotacaatgggaagotgtttgacotgotcaacaagaaqqocaaqotqoqqqqqqq                | 1261 | Qy        |
| 1260 |   |      | Дb        |
| J i  | teetgaagaateaaeeetgetaeeggaagttqqqeetqqaagtetatqtqaea+++++-               | 1201 | Qy        |
|      | TCTGGGAAAGCCCAGAATGCATCCAAAGGGATCTATGCCATGGCCTCCCGGGACGTCTTC              | 1141 | B         |
| 3    | ctgggaaagcccagaatgcatccaaagggatctatqccatqqcctcccgggaacgtr++c              |      | Q         |
| 14   | ACTTGTTTTGCATATGGCCAGACAGGAAGTGGCAAGACATACTATGGGCGGAGACCTC                | 1081 | рb        |
| 1 8  | cttgttttgcatatggccagacaggaagtggcaagacacatactatgggcggagacct                | 1081 | Qy        |
| 1080 | yy-th-acayy-theadayocadgycadcayataayataaatetttgaaggtggaaaagca<br>         |      | D 5       |
| 1020 | ATCTGGAGAACCAAGCATTCTGCTTTGACTTTGCATTTGATGAAACAGCTTCGAAT                  | 1021 | , p       |
| 1020 | tatctggagaaccaagcattctgctttgactttgcatttgatgaaacagcttcgaatgaa              |      | , Q       |
| O.   | Tree  |      | ₽         |
| ō.   | rtagcaagtgtctcctcttggtacatgaacccaagttgaaagtggacttaacc                     |      | γo        |
| 900  | GTTAGGAAACGCCCACTGAATAAGCAAGAATTGGCCAAGAAAGA                              |      | <b>Db</b> |
|      | ttaggaaaggcccactgaataaggaaattggccacacaca                                  |      | ð         |
|      | TTGGAATGTCATCACTACTATGACTGACTGACTGACGACGACGACGACGACGACGACGACGACGACGACGACG | 78   | 문         |
| _    | tggaatgtcatccacttastatgactgatcctatcgaagagagagagagatatatatat               | 78   | Ş         |

|              | totactttactgtctccctagagtcctagaggatccctac 2740<br>  | 2701<br>2701 | Db Oy      |
|--------------|--|--------------|------------|
| 2700<br>2700 | . aggetttgggcegageaetgaatgtettgtaetttaaaaaaatgtttetgagaeetett<br>  | 2641         | D 5        |
| 2640<br>2640 | Ciggctctggggagagagagggggctttagtacagctatctgctggctctaaaccttct  | 0.00         | B 2        |
| 2580<br>2580 | ttetesgeageateetgeetgegtggactggetgataatggagaggeteetgggggttgte  | 5 2 2        | 5 A 5      |
| 2520<br>2520 | . tlagitaccettigigiigecettetticeateaaggggaaigiieteagealagaget<br>  | 4 6          | B 5        |
| 2460<br>2460 | gtgacatgggacactccttttctgttcctcagttgtcgccctcacgagagggaaggagctc  | 0 0          | p 2        |
| 2400         | ttotggtaaatgccaagtatgggggcatctgggcccagggcagctggggaggggggtcaga<br>  |              | γ dq γ     |
| 2340<br>2340 | gcctccccagagaaactttgggtacctggtggtctaggcagggtctgagctgggacagg  | 28           | B 6        |
| 2280<br>2280 | <pre>cggccccagtgacgactgcaaataaaatctgtttggtttgacacccagcctcttccctg [                                    </pre> | 22 2         | g dy       |
| 2220         | 9CCTLAGGCCGGCCATGCAGCTGGAAGAGGCAGGCAAGACAATAAGCAGCAAGAAA<br>   | 16           | Db Oy      |
| 2160<br>2160 | 9c99aatct9ctct99ccca9caa<br>   | 10           | P D        |
| 2100         | 1 cttgagctctctgagatgaccgagcagccagactatgacctggagacctttgtgaacaaa<br>   | 2 2          | р <i>9</i> |
| 2040         | 1 gagetggaggagaaggetatggaagageteaaggagateatacageaaggaeeagaetgg<br>   | .98          | p 0y       |
| 1980<br>1980 | 1 gaagaggaggaactgtcttcccagatgtccagctttaacgaagccatgactcagatcagg   | 192<br>192   | B          |
| 1920<br>1920 | 1 gaaacagaagatggaagcetgetetaacggggcgctgattecaggcaatttatecaag<br>   | 186<br>186   | 0 <b>9</b> |

RESULT 5
BC008764
LOCUS
DEFINITION

ACCESSION VERSION KEYWORDS SOURCE ORGANISM BC008764 2832 bp mRNA linear PRI 12-JUL-2001 Homo sapiens, kinesin-like 6 (mitotic centromere-associated kinesin), clone MGC:1266 INAGE:3347571, mRNA, complete cds. BC008764.1 GI:14250609 MGC.

human. Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Hammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

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Activating signal cointegrator 1, a novel transcription coactivator of nuclear receptors, and its cytosolic localization under conditions of serum deprivation Mol. Cell. Biol. 19 (9), 6323-6332 (1999)
                                                                  Submitted (12-JUL-1999) Center for Ligand and Transcription, Chonnam National University, 300 Yongbong-dong Puk-gu, Kwang 500-757, Korea
                                                                                                          2 (bases 1 to 2160)
Kim, H.J., Moore, D.D.
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Homo sapiens activating
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                                                                                               Direct Submission
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                      /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                      Location/Qualifiers
 /note="ASC-1; transcription
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1 (bases 1 to 1981)

Yue, H., Tang, Y.T., Hillman, J.L., Lai, P., Bandman, O., Baughn, M.R., Azimzai, Y., Yang, J., Reddy, R. and Lu, D.A.
Human intracellular signaling molecules
Patent: WO 0077040 Pa. 69 21-DEC-2000;
Incyte Genomics, Inc. (US)
Iocation/Qualifiers
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# ALIGNMENTS

JOURNAL MEDLINE REFERENCE AUTHORS TITLE REFERENCE AUTHORS TITLE REFERENCE AUTHORS JOURNAL VERSION
KEYWORDS
SOURCE
ORGANISM RESULT 1
HUMP53T
LOCUS
DEFINITION
ACCESSION Human p53 cellular tumor antigen mRNA, complete cds. R03199. GI:189478
antigen: \*\*\*\* Unpublished (1985)
2 (bases 1 to 1760)
Harlow, E., Williamson, N.M., Ralston, R., He Molecular cloning and in vitro expression cellular tumor antigen p53
MOL Cell. Biol. 5 (7), 1601-1610 (1985) McBride,O.W., Merry,D. and Givol,D.
The gene for human p53 cellular tumor antigen is located 85267676 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1760) antigen; antigen p53. Human vulva carcinoma Homo sapiens Harlow, E. (sites) (cell line A431), cDNA to mRNA, clone pR4-2 Heliman, D.M. and Adams, T.E. on of a cDNA clone for human PRI 07-JAN-1995 9

Result

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Query Match Length

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Description

SUMMARIES

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                                                                       CAAAAAAAAAAAAAAAAGTCTAGAGCCACCGTCCAGGGAGCAGGTAGCTGCTGGGCTC
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OS HOP
PN JP
PD JP
PD 112-
PF 31-
PI KAM-
PC C11-
C12R1::
PC (C1-
CC St1-
CC 
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1 (bases 1 to 1760)

Rawaguchi, R. and Hikichi, K.

CELL-LINE ORIGINATED FROM HUMAN BONE MARROW CELLS

Patent: JP 1997206070-A 1 12-AUG-1997;
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JP 1997206070-A/1.
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E13558
E13558.1 GI:3252
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JP 1997206070-A/1
12-AUG-1997
31-JAN-1996 JP 1996037400
KAWAGUCHI RYUJI, HIKICHI KAZUMASA
C12N5/06,C07H21/04,C12N9/08//C12N15/09,C12Q1/68,(C12N5/06,
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strandedness: Double;
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/db_xref="taxon:9606"
512 c 461 g 38
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/cell_type='bone marrow-derived cell'
/cell_line='CMC-1'
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Pred. No. 0;
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Copyright (c) 1993 - 2000 compugen Ltd.
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| 1968<br>2422<br>3165<br>125020<br>4726<br>2590<br>3131<br>3131   | 406<br>110000<br>198057<br>164303<br>56944<br>42265<br>67322<br>67324<br>170324<br>32012<br>285592<br>1486  | 178635<br>2512<br>1622<br>11380<br>2396<br>3080<br>3080<br>3080<br>16301<br>16301<br>1549<br>765<br>652<br>652<br>38636<br>652<br>1549<br>765<br>765<br>765<br>765<br>765<br>765<br>765<br>765<br>765<br>765  | 2617<br>2745<br>121112<br>158651<br>174818  |
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| AF032437 Homo sapi<br>AF032437 Homo sapi<br>AX055382 Sequence<br>X58995 House mRNA<br>AF429315 Homo sapi<br>AB051552 Homo sapi<br>AF080000 Homo sapi<br>AX008273 Sequence<br>AX008274 Sequence | a Sequence stion (3 of Mus muscu Rattus no Mus muscu Homo sapi Sequence Drosophil Caenorhabdi Homo sapi Rattus no Rattus no Rattus no   |   | AB000409 Homo sapi<br>BC002755 Homo sapi<br>AL136373 Human DNA<br>AL357392 Homo sapi<br>AL39001 Human DNA |

# ALIGNMENTS

REFERENCE AUTHORS TITLE REFERENCE AUTHORS TITLE JOURNAL RESULT 1
AB000409
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS SOURCE ORGANISM Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Hammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 2617)
Fikunaga, R. and Hunter, T.
Direct Submission
Submitted (11-JAN-1997) Rikiro Fukunaga, Osaka University Medical School, Department of Genetics B-3; 2-2 Yamadaoka, Suita, Osaka 565-0871, Japan (E-mail:fukunagaēgenetic.med.osaka-u.ac.jp, Tel:81-6-879-3318, Fax:81-6-879-3319) Fukunaga, $\hat{R}$ , and Hunter,T. MNRI, a new MAP kinase-activated protein kinase, isolated by a novel expression screening method for identifying protein kinase 2617 bp mRNA Homo sapiens mRNA for MNK1, complete cds. AB000409 AB000409.1 GI:2077824 MNK1 Homo sapiens Homo sapiens cell\_line:HeLa cDNA to mRNA. **XX**1. (sites) linear PRI 05-FEB-1999

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                                    1129 GGTGCGAGATGCAAAGCAGAGACTTAGCGCCGCCCAAGTTCTGCAGCACCCATGGGTGCA 1188
                                                                                                    1069 TCCTGACAAGGACTGGGCACACATCTCCAGTGAAGCCAAAGACCTCATCTCCAAGCTCCT 1128
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601 9999caa9ctccagaaaagggactccccac9ccgcaagtcctccagaggaacagcagcac 660
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/db_xref-"G1:2077825"

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/trans.lation-"MVSSGKLEKPIEMGSSEPLPIADGDRRRKKKRRGRATDSLPGKF

EDMYKLTSELLGEGAYAKVQGAVSLQNGKEYAVKIIEKQAGHSRSKVYRETLYQCQ

GNKNILELIEFEDDTRFYLLVEKLQGGSILAHIGKOKHFNEREASRVYRDVAAALDF

GNKNILELLEFEDDTRFYLVEKLQGGSILAHIGKOKKHNERECTPITTPELTTPGGS

AEYMAPEVEVEVTDQATTYDKRCDLMSLGVVLYIMLGGYPEFVGHGCADGGDRGEVC

AEYMAPEVEVEVTDQATTYDKRCDLMSLGVVLYIMLGGYPEFVGHGCADGGDRGEVC

RYCQNKLFESIOEGKVEFPDKOMAHISSEAKDLISKLLVRDAKQRLSAAQVLQHPMYQ

GQAPEKGLPTPQVLQRNSSTMDLTLFAAEAIALNRQLSQHEENELABEPEALADGLCS
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188. .1462
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/db_xref="taxon:9606"
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| etta 1740                 | tgggttttaatcagcagttccctattattctgattttaagctgttcctgtgatgaac  | 1681         | Qy         |
|---------------------------|--|--------------|------------|
| DACT 2267                 |  | N)           | da<br>J    |
| CAA 220                   | GTTTGGTGTTTTTACCATTCTTTTTTTTTTTTTTTTTTT  | 2149<br>1621 | Q B        |
| Caa 1                     |  | 1561         | Qy         |
| 1111<br>1111<br>AAAA 2148 |  | 80           | DЬ         |
| GTT 208                   | atcatcccctttqttqttqttqctqcfaaaqrcagfaatcq+++++++   | 50           | Οy         |
| gtt 150                   | 9 TCTGCAGCACGGAAAACCACACATAATCTTTTTTTTTTT  | 2029         | 당 5        |
| TCCG 2028                 | CCTCAATTCAGGGAAGGGCAAGGAGCCTTCCTCA   | 96           | ? <b>B</b> |
| .ccg 144                  | ttcctcattcaggaaatcaaatcagtct   | لمأ          | Qy         |
| 96                        | TTCCTCTGTCCTCCGGATGTCCTCTTTGCCCGTCTTCTCCCTTGGCTGAGCAAAGCC  | 1909         | ф          |
| atc 138                   | toototgtootooggatgtoototttgcccgtottctcccttggctgagcaaagc  | 1321         | Qy         |
| 9                         | CIGCCGACACGTGCTCTTCCCTCTCTCTCTCACCCTCTCTGGCGGTCCTTCC   | 1849         | 40         |
| acc 132                   | rgccgacacgtgcctcttccctctctctctgtcaccctcctctqqcqqtccttc   | 1261         | Qy         |
| GAGG 1848                 | AGCTGTGGCGGCTGGGGCTGCAGCCTGCAGGGAGAAGCAAGAAGCATCAGTTGACAA  | 1789         | Д          |
| 200 106                   | estgt9g9g9gct9g9gctgcagcctqcaggaggaggagagagaggaggaggaggaggaggaggagg  | 1201         | Qy         |
| C101                      |  | 7            | Db         |
| 7/1                       | ordinate of the second of the  | 1141         | Qγ         |
| cttc 114                  |  | 66           | Db :       |
| TCTT 166                  | GENERAL CONTROL CONTRO | 80           | ν          |
|                           | CATCAACCCCCATTTCCCTACGGTCCTGGAAGAAAGCTTTTTTCAAACAGGTTCTTACGAAGGGTCCTGGAAGAAAGCTTTTTCCAACGGTTCTTTTCAAACAGGAAAAAGCTTTTTTCAAACAGGAAGAAAAAGCTTTTTTCAAACAGGAAGAAAAAGCTTTTTTCAAACAGGAAGAAAAAGCTTTTTTTCAAACAGGAAGAAAAAGCTTTTTTCAAACAGGAAAAAGCTTTTTTCAAACAGGAAAAAGCTTTTTTCAAACAGGAAAAAGCTTTTTTTT   | 60           | Db -       |
| Tree 160                  | atcaaccoccatttcoctagagtoctggaggagagagagagagattcatcatcatcatcatcatcatcatcatcatcatcatc  | 02           | Qy         |
| ttcc 102                  |  | 1549         | B 4        |
| 8                         | TAGGCCTGGCCAGGCATTGTCCCCTGGAAACCTGTGTGGCTAAAGTCTGCTGAGC  | 1404         | ? 5        |
| 2aggc 960                 | ctaggcctggccaggcattgtcccctggaaacctgtgtggctaaagtctgctgagc   | 9            | } S        |
| GGCC 14                   | GGTGAAGACAGGAGCCCGCCCACAGCACTCTGAAATGCTCCAGTCACACCTTATA  | Ñ            | Db         |
| 9900 900                  |  | 841          | δ          |
| GCCG 14                   | GCTTTCCCCTCCTGCAAGTCACGCCTGGCCCGGAGACGGCCCTGGCCCAGGCAG   | 1369         | DЬ         |
| gccg 840                  | ottteceeteetgeaagteaegeetggeeeggagaegggeeetggeeeaggeag   | 781          | Qy         |
| 7G <b>X</b>               | CGAAGAGAACGAACTAGCAGAGGAGCAGAGGCACTAGCTGATGGCCTCTGCTCCA  | 1309         | Db         |
| toan 78                   | yaagagasacgaactagcagaggagccagaggcactagctgatggcctctgctcc  | 721          | Qy         |
| agca 720<br>              | aligacityacgetettegeagetyaggecalegecettaacegecagetatete  | 1249         | dg<br>V    |
| 11111<br>AGCAC 1248       |  |              | n D        |
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REFERENCE
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                                                                                                                                                                                                                                                                     Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLML at: http://image.llnl.gov Series; IRAL Plate: 12 Row: m Collumn: 12
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA g1: 4505190.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: National Institutes of Health Intramural
Sequencing Center (NISC),
Gaithersburg, Maryland;
Heb site: http://www.nisc.nih.gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact:

nisc_mgcenhgri.nih.gov
Shevchenko,Y., Wetherby,K.D., Beckstrom-Sternberg,S.M.,
Benjamin,B., Blakesley,R.W., Bouffard,G.G., Brinkley,C., Brooks,S.,
Dietrich,N.L., Guan,X., Gupta,J., Ho,S.-L., Karlins,E. Legaspi,R.,
Lim,M., Maduro,Q.L., Masiello,C., Mastrian,S.D., McCloskey,J.C.,
McDowell,J., Pearson,R., Snyder,B., Stantripop,S., Thomas,P.J.,
Tiongson,E.E., Touchman,J.W., Tsurgeon,C., Vogt,J.L., Walker,M.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NIH-MGC Project URL: http://mgc.ncl.nih.gov
Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Direct Submission
Submitted (05-FEB-2001) National Institutes of Health, Mammalian Submitted (05-FEB-2001) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Gene Collection (MGC), Cancer Genomics Office, National Cancer General National Cancer General National Canada (National Canada National Canada (National Canada National Canada National Canada (National Canada National Canada (National Canada National Canada National Canada (National Canada National Canada (National Canada National Canada (National Canad
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1 (bases 1 to 2745)
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/clone="MGC:3690 IMAGE:3629765"
/tissue_type="Placenta, choriocarcinoma"
/clone_lib="NIH_MGC_21"
                                                                                                                              /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                            Location/Qualifiers
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Best Local Similarity
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GAGGCCATCGCCCTTAACCGCCAGCTATCTCAGCACGAAGAAACGAACTAGCAGAGGAG
                                                                             CCCACGCCCAAGTCCTCCAGAGGAACAGCAGCACAATGGACCTGACGCTCTTCGCAGCT
                                                                                                                                             cccacgccgcaagtcctccagaggaacagcagcacaatggacctgacgctcttcgcagct 685
                                                                                                                                                                                  AGCGCCGCCCAAGTTCTGCAGCACCCATGGGTGCAGGGGCAAGCTCCAGAAAAGGGACTC 1322
                                                                                                                                                                                                    agcgccgccaagttctgcagcacccatgggtgcaggggcaagctccagaaaagggactc
                                                                                                                                                                                                                                               TCCAGTGAAGCCAAAGACCTCATCTCCAAGCTCCTGGTGCGAGATGCAAAGCAGAGACTT
                                                                                                                                                                                                                                                                   tccagtgaagccaaagacctcatctccaagctcctggtgcgagatgcaaagcagaaactt 565
                                                                                                                                                                                                                                                                                                          CTGTTTGAAAGCATCCAGGAAGGCAAGTATGAGTTTCCTGACAAGGACTGGGCACACATC
                                                                                                                                                                                                                                                                                                                          ctgtttgaaagcatccaggaaggcaagtatgagtttcctgacaaggactggggcacacatc
                                                                                                                                                                                                                                                                                                                                                                       CACTGCGGGGCCGACTGTGGCTGGGACCGGGGCGAGGTCTGCAGGGTGTGCCAGAACAAG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /product="Similar to MAP kinase-interacting
serine/threonine kinase 1*
/protein_id="AkHO2755.1"
/protein_id="AkHO2755.1"
/db_xref="GI:12803829"
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CESPEKVSFVKICDFDLGSGMKLWNSCTPTTPELTTPGGSAEYMAPEVVEVTDQAT
FYDRRCDLWSLGVVLYIMLSGYPPFVGHCGADCGWDRGEVCRVCQNKLTESJQEGKYE
FPDKDWAHISSEANDLISKLLVRUAKORLSAAQVLQHPWQQQAPEKGLPPPQVLQRN
SCTUNTITESSEERITIANGTCGUTERBUFFY SERDERIT
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174. 1571
/codon_start=1
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99.7%;
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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Perfect score:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                         2885
2831.4
2181.6
1558.4
953.6
671
669.6
                                                                                                                                                                                                                                                                                                                              Score
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1: /SIDS1/gegdata/hc
2: /SIDS1/gegdata/hc
3: /SIDS1/gegdata/hc
4: /SIDS1/gegdata/hc
5: /SIDS1/gegdata/hc
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Match Length DB
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\( \sinsip_ggdata \) hold-geneseq/geneseqn-embl/NA1981.DAT: 3
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| Human breast cance | AAL15037 | 2      | 9     | . 2      | 121.4 | :            |
| Drosophila melanog | ABL10648 | 23     | 9384  |          | 134.6 | - <b>1</b> 2 |
| Human immune/haema | AAK57190 | 22     | 325   |          | 135.2 | , î          |
| Arabidopsis thalia | AAC50614 | 21     | 1993  |          | 138   | -            |
| dopsis :           | AAC34680 | 21     | 1991  |          | 138   | 0            |
|                    | AAL23890 | 22     | 501   | . 0      |       | 39           |
| Human immune/haema | AAK69720 | 22     | 323   |          | 139.2 | 8            |
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| ORFX               | AAC76952 | 21     | 2480  |          |       | 4            |
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The invention relates to a method for diagnosing a disorder characterised by expression of a human cancer associated antigen precursor coded for by a nucleic acid molecule (NAM). The method comprises: (a) contacting a biological sample isolated from a subject with an agent that specifically binds to the NAM, an expression product or a fragment of an expression product complexed with an HLA molecule; and (b) determining the interaction between the agent and the NAM or the expression product as a determination of the disorder. The products and methods can be used in characterised by the expression of various cancer associated antigens. The invention provides nucleic acid sequences and encoded polypeptides which are cancer associated antigen precursors expressed in human breast cancer, renal cancer, colon cancer, gastric cancer, prostate cancer and lines cancer and cancer, colon cancer, gastric cancer, prostate cancer and
                                                                                                                                                                                                                                                                                                                                                              Claim 67; Page 651-652; 787pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                    New isolated cancer associated nucleic acids and polypeptides - isolated using sera from cancer patients, used to develop products for the diagnosis, monitoring or treatment of cancers
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| 20         | gaccatgccccgggagggctccacagagagtgagagcacacaggaagacctggagga  | 1141 | Qy         |
|            |  | 1081 | D<br>D     |
| - 3        | otgaggagacagaggaggagctgacggagcagcaggaggtcttgctqqqqqaqqaagcagc  | 1081 | Qy         |
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| 2640<br>2640 | y 2581 gazagtcatcgagatccagagcamacactggagctgtgtgcagamagttcgccgctggtct<br>            | P 6              |
| 58           | 2521 gcccttggatgaggcagtcttgcagcaaaagcccaacatcaacgcagtggccacgctag<br>                | P 49             |
| 52           | •   | B 3              |
|              | 2401 gcagctgatgaccctggcagggggccgggtggtgctggccctggagggag                             | B 5              |
|              | 2341 acatotytotoctotygytygotactotytoacogocagatyttitygocacttyacoag                   | B 04             |
| 2340<br>2340 | 2281 tgcccacgagttctcacctgatgtggtcctagtctccgccgggtttgatgctgttgaagg                   | å å              |
| 2280<br>2280 | 2221 ggaccccccattggagacgtggagtaccttacagccttcaggacagtggtgatgcccat                    | B &              |
| 2220<br>2220 | 2161 agaggttggtggaggaccaggcgtggggtacaatgtgaacgtggcatggacaggaggtgt<br>               | P 2              |
| 2160<br>2160 | 2101 ctacatctctctgcatcgctatgacaacgggaacttctttccaggctctggggctcctga<br>               | B 8              |
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KW vulnerary; antipsoriatic; antiparkinsonian; nootropic; neuroprotective;
KW anticonvulsant; osteopathic; antiarthritic; immunosuppressant; cardiant;
KW immunostimulant; thrombolytic; coagulant; vasotropic; antidiabetic;
KW hypotensive; dermatological; immunosuppressive; antinflammatory;
KW antianaemic; gene therapy; cancer; proliferative disorder; hypertension;
KW antianaemic; gene therapy; cancer; proliferative disorder; hypertension;
KW neurodegenerative disorder; osteoarthritis; graft vs host disease;
KW cardiovascular disease; diabetes mellitus; hypothyroidism; SCID; AIDS;
KW cholesterol ester storage; systemic lupus erythematosus; infection;
KW severe combined immunodeficiency; malaria, autoimmune disorder; asthma;
KW allergy; aplastic anaemia; nocturnal haemoglobinuria; burn; wound;
KW bone damage; cartilage damage; antiinflammatory disease; coagulation;
KW thrombosis; contraceptive; ss.
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Novel nucleic acids and peptides derived from open reading frame useful for treating e.g. cancers, proliferative disorders, neurodegenerative disorders and cardiovascular disease.

Claim 5; Page 4726-4728; 5507pp; English

AAC74446 to AAC77606 encode the proteins given in AAB40237 to AAB43397, which represent the human ORFX open reading frames 1 to 3161. The ORFX sequences have activities such as: cytostatic; hepatotropic; vulnerary; antipsoriatic; antiparkinsonian; nootropic; neuroprotective; osteopathic; anticonvulsant; antiarthritic; immunosuppressant; immunostimulant; cardiant; thrombolytic; coagulant; vasotropic; antidiabetic; hypotensive; dermatological; immunosuppressive; antifinimunatory; antibacterial; antiviral; antifungal; antirheumatic; antithyroid; and antianaemic. The sequences can be used for determining the presence of or predisposition to, or preventing or treating pathological conditions associated with an ORFX-associated disorder. The

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| VDF24174           | 101 34 30 C        | AAA70336           | AATOSASA           | ABL34468             | AAX20248           | AAA/0105 | 70132007 | ABI 30060          | ABL34131           | AAX60137 | AAF22305 | ABL32149 | ABL33101 | AAV74358           | AAA70132           | MS/6397            | 200000000          | 11001600           | ABI 32028         | AAN60472           | AAK52408             | ABL34347 | AAA70106           | AAS61077             | ABL32326   | ABL34358   | AAT84152         | AAS46448           | ABL33053 | AAS46686           | ABL33134 | ABL32316 | AAA70212            | AAI38216 | AAK32370 | AAK06674 | 855     | AAS13670 |
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#### ALIGNMENTS

RESULT AAX40071

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AAX40071 standard; DNA; 2569 BP.

AAX40071;

Colon cancer associated gene.

02-JUL-1999 (first entry)

PIXXX 22-JUN-1998; 17-JUL-1997; 10-OCT-1997; 10-OCT-1997; 10-OCT-1997; 11-OCT-1997; Chen Y, (LUDW-) LUDWIG INST CANCER RES Cancer associated antigen; diagnosis; research; treatment; human; breast cancer; colon cancer; gastric cancer; renal cancer; lung cancer; prostate cancer; ss. 15-JUL-1998; 28-JAN-1999. WO9904265-A2 Homo sapiens Gout I, Gure A, O'Hare 98US-0102322. 97US-0896164. 97US-0061599. 97US-0061765. 97US-0948705. 97GB-0021697. 98WO-US14679 X Obata Y, 01d LJ;

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to a method for diagnosing a disorder characterised by expression of a human cancer associated antigen precursor coded for by a nucleic acid molecule (NAM). The method comprises: (a) contacting a biological sample isolated from a subject with an agent that specifically binds to the NAM, an expression product or a fragment of an expression product complexed with an HLA molecule; and (b) determining the interaction between the agent and the NAM or the expression product as a determination of the disorder. The products and methods can be used in the diagnosis, monitoring, research, or treatment of conditions characterised by the expression of various cancer associated antigens. The invention provides nucleic acid sequences and encoded polypeptides which are cancer associated antigen precursors expressed in human breast cancer, renal cancer, colon cancer, gastric cancer, prostate cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 67; Page 677-678; 787pp; English.
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| 1680 | l atacctgattacaggatttaacacattactaccacatgctaatgaaacaaaggagatac   | 162         | 밁              |
| 1680 | l atacctgattacagg   |             | γo             |
| 1620 | l tgaggaactggaaggtgaattagagtgccatctggttgacaaagcagagtttgatgata   | 156         | 밁              |
|      | 1 tgaggaactggaaggtgaattagagtgccatctggttgacaaagcagagtttgatgataa  |             | Qy             |
| 1560 | tgataacatttgtgaagggtttgaaaacccctgcaaagataaaattgata              | 150         | ф              |
| 1560 | cctaaaactgataacatttgtgaagggtttgaaaacccctgcaaa                   | 150         | δ<br>δ         |
| 1500 | actgaaaaagatgtaaacattattggaaccaaaccaagtaacttccgtg               | 144         | ДЬ             |
| 1500 | gctgaaataactgaaaaagatgtaaacattattg                              | 144         | Qy             |
| 1440 | taagtaataaagctgtacaaaataaaatatatatggaacaacagacag                | 138         | 8              |
| 1440 | aaattaagtaataaagctgtacaaaataaaaatatatatggaacaacagagacagatgagct  |             | οy             |
| 1380 |   | 132         | 망              |
| 1380 | aatattgactcagagataaagcagactcttgggtcctacaatcttgatgtaggacttaa     | 32          | Q              |
| 1320 |   | 26          | Дb             |
| 1320 | attaatgagaaaatggagaaatattotaagactggtattaaaagtgctcttcccctatga    | 126         | οy             |
| 1260 | gatatecetttageaattgttgaettgaaaageaaaggtaaaag                    | N           | 뮍              |
| 1260 | agaagggatgtttgtgatatccctttagcaattgttgacttgaaaagcaaaggtaaaag     | 120         | Qy             |
| 1200 | _ aaatgactatttctatgaaataataacagaagatgtgttggaaataacaatactagaaat  |             | D <sub>D</sub> |
| 1200 | aaatgactatttctatgaaataataacagaagatgtgttggaaataacaatacta         | 1141        | Qy             |
| 1140 | agcctttccatgttgcctctcagggtttaacatttcagaaggattatgttctcaag        | 0           | Db             |
| 1140 | gcctttccatgttgcctctcagggtttaacatttcagaaggattatgttctcaagagg      | 1081        | Q              |
| 1080 | ctgtgtggacccaaaagcactctgggccattccttctgaacttctgtcggttcccatg      | 1021        | Ð              |
| 1080 | ctgtgtggggcccaaaagcactctgggccattcctgaacttctgtcggttcccatgc       | 1021        | Qγ             |
| 1020 | taatatttgtgaagattatcttgtatctgtcaggcttgtggactttggaa              | 961         | DЬ             |
| 1020 | aatatttgtgaagattatcttgtatctgtcaggcttgtgggactttggaaacattgaag     | 961         | Оу             |
| 960  | .ccttgtatagtaagatacagagaagatggacattattatagggcacttatca           | 901         | ₽              |
| 60   | ggagatccttgtatagtaagatacagagaagatggacattattatagg                | 901         | ΩY             |
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| 20   | gtaattaaaagtgccagttcaaagtctgttaacaaatcagacattgacacttcagtatt 7   | 661         | ν.             |
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                                                     DNA encoding novel human diagnostic protein $23250.
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polymerase chain reaction (PCR) primers, oligomers, and for chromosome cand gene mapping, and in recombinant production of (II). The polymerase chain reaction (PCR) primers, oligomers, and for chromosome cand gene mapping, and in recombinant production of (II). The polymerase decrease in dasgnostics as expressed sequence tags for identifying expressed genes. (I) is seful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving CC (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polynucleotide sequences have applications in constitution of genetic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and diagnostic coding sequences of that involving amino acid sequences. AAS64197-AAS94564 represent novel human diagnostic coding sequences of the invention.

CC Note: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO at figure the sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess biodiversity -
                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; SEQ ID No 23250; 103pp; English
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## ALIGNMENTS

RESULT AAX40070 10-OCT-1997; 10-OCT-1997; 10-OCT-1997; 11-OCT-1997; Chen Y, (LUDW-) LUDWIG INST CANCER RES Cancer associated antigen; diagnosis; research; treatment; breast cancer; colon cancer; gastric cancer; renal cancer; 22-JUN-1998; 17-JUL-1997; W09904265-A2. prostate cancer; ss. Colon cancer associated gene. 02-JUL-1999 AAX40070; AAX40070 standard; DNA; 1087 BP. 15-JUL-1998; 28-JAN-1999. Homo sapiens μ Gout I, Gure A, O'Hare M, (first entry) 98US-0102322. 97US-0896164. 97US-0061599. 97US-0061765. 97US-0948705. 97GB-0021697. 98WO-US14679 Obata Y, Old LJ; human; lung cancer;

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Matches 1087
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| brain              | 53       | 22  | 6483    | 6.3  | N     | 3             |
| brain              | AAH57546 | 2   | 3107    |      | 123   | 42            |
| Human glial fibril | AXX75764 | 19  | 3017    |      | 123   |               |
| 00100              | AAZ41301 | 2 1 | 2156    | on - | N٠    | 0 0           |
| phila              | ABL11998 | 2 6 | 200     | 7.   | 136.6 |               |
| Human gene signatu | AAT25764 | 16  | 212     | 7.5  | 145.6 |               |
| 124834             | AAI56148 | 22  | 238     | 11.5 | 224   | 3 6           |
| #1721              | AAI27286 | 22  | 238     | 11.5 | 224   | 35            |
| bone a             | AAK50202 | 22  | 238     | 11.5 | 224   | ω<br><b>4</b> |
| brain e            | AAK24148 | 22  | 238     | 11.5 | 224   | 3             |
| <b>*</b> 18650     | ABA40184 | 22  | 238     | 11.5 | 224   | <u>د</u>      |
| foetal             | ABA75571 | 22  | 238     | 11.5 | 224   | 31            |
| 1184               | AAI43159 | 22  | 575     | 11.6 | 227   | 30            |
|                    | MI18151  | 22  | 575     | 11.6 | 227   | 29            |
| bone m             | AAX37320 | 22  | 575     | 11.6 | 227   | 28            |
| brain              | AAK11548 | 22  | 575     |      | 227   | 27            |
| #8837 £            | ABA30371 | 22  | 575     | 11.6 | 227   | 26            |
| Human foetal live  | ABA63120 | 22  | 575     | 11.6 | 227   | 25            |
| 0                  | ABL16133 | 23  | 2306    | 12.7 | 249   | 24            |
|                    | ABL32446 | 24  | 6568    | 14.3 | 279.6 | 23            |
| qene s             | AAT19125 | 16  | 338     | 14.7 | 287.4 | 22            |
|                    | ABL32447 | 24  | 6568    | 15.6 | 305.4 | 21            |
|                    | AAZ16900 | 20  | 726     | 16.0 | 313.2 | 20            |
| phila              | ABL11999 | 23  | 2923    | 16.2 |       | 19            |
| lung               | AAD23206 | 23  | 121     | 18.4 | 359   | 18            |
| unq                | AAC79131 | 21  | 424     | 18.4 | 359   | 17            |
| lung tu            | AA207241 | 20  | 121     | 18.4 | 359   | 16            |
| _                  | AA129106 | N   | 416     |      | 404.8 |               |
|                    | AA157657 | N   | 25424   |      | 478   | 14            |
| _                  | AAK90280 | N   | 25424   |      | 478   | 13            |
| Human colorectal   | AAI57656 |     | 5 25423 |      | 478   | 12            |
| diges              | AAK90279 | N   | 25423   | 24.5 | 478   |               |
| Human lung tumour  | AAD23236 | N   | 549     |      | 482.4 |               |

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### ALIGNMENTS

| AC AAX39673;  XX  XX  DT 02-JUL-1999 (first entry)  XX  DE Renal cancer associated gene.  XX  Cancer associated antigen; diagnosis; research; treatment; human;  KW Cancer associated antigen; diagnosis; research; treatment; human;  KW Dreast cancer; colon cancer; gastric cancer; renal cancer; lung cancer;  KW prostate cancer; ss.  XX  OS Homo sapiens.  XX  VS  PD 28-JAN-1999.  XX  XX  PD 28-JAN-1999.  XX  PF 15-JUL-1998; 98WO-US14679.  XX  PR 17-JUL-1998; 98US-0102322.  PR 17-JUL-1997; 97US-0861599.  PR 10-OCT-1997; 97US-0861599.  PR 10-OCT-1997; 97US-0948705.  PR 11-OCT-1997; 97US-0921697. | TITE- LITTE TACE CANCED BE      | P 3    |
|--|---------------------------------|--------|
| AAX39673;  02-JUL-1999 (first entry)  Renal cancer associated gene.  Cancer associated antigen; diagnosis; research; treatment; breast cancer; colon cancer; gastric cancer; renal cancer; prostate cancer; ss.  Homo sapiens.  W09904265-A2.  28-JAN-1999. 15-JUL-1998; 98WO-US14679. 22-JUN-1998; 98WO-US14679. 22-JUN-1998; 98US-0102322. 17-UL-1997; 97US-0061765. 10-CCT-1997; 97US-0061765. 10-CCT-1997; 97US-0948705.   |                                 |        |
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| AAX39673;  02-JUL-1999 (first entry)  Renal cancer associated gene.  Cancer associated antigen; diagnosis; research; treatment; breast cancer; colon cancer; gastric cancer; renal cancer; prostate cancer; ss.  Homo sapiens.  W09904265-A2. 28-JAN-1999. 15-JUL-1998; 98WO-US14679. 22-JUN-1998; 98US-0102322. 17-JUL-1997; 97US-0896164. 10-CCT-1997; 97US-0081599.   |                                 |        |
| AAX39673;  02-JUL-1999 (first entry)  Renal cancer associated gene.  Cancer associated antigen; diagnosis; research; treatment; breast cancer; colon cancer; gastric cancer; renal cancer; prostate cancer; ss.  Homo sapiens.  W09904265-A2.  28-JAN-1999.  15-JUL-1998; 98WO-US14679.  22-JUN-1998; 98WO-US14679.  22-JUN-1997; 97US-0096164.  |                                 |        |
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| AAX39673;  02-JUL-1999 (first entry)  Renal cancer associated gene.  Cancer associated antigen; diagnosis; research; treatment; breast cancer; colon cancer; gastric cancer; renal cancer; prostate cancer; ss.  Homo sapiens.   |                                 | XX     |
| AAX39673;  02-JUL-1999 (first entry)  Renal cancer associated gene.  Cancer associated antigen; diagnosis; research; treatment; breast cancer; colon cancer; gastric cancer; renal cancer; prostate cancer; ss.  Homo sapiens.   | )9904265-A2.                    |        |
| AAX39673;  02-JUL-1999 (first entry)  Renal cancer associated gene.  Cancer associated antigen; diagnosis; research; treatment; breast cancer; colon cancer; gastric cancer; renal cancer; prostate cancer; ss.  Homo sapiens.   |                                 |        |
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| AAX39673;<br>02-JUL-1999   | nal cancer associated gene.     |        |
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| ID AAX39673 standard; DNA; 1953 BP.  | UX39673 standard; DNA; 1953 BP. |        |
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to a method for diagnosing a disorder characterised by expression of a human cancer associated antigen precursor coded for by a nucleic acid molecule (NAM). The method comprises: (a) contacting a biological sample isolated from a subject with an agent that specifically binds to the NAM, an expression product or a fragment of an expression product complexed with an HLA molecule; and (b) determining the interaction between the agent and the NAM or the expression product as a determination of the disorder. The products and methods can be used in the diagnosis, monitoring, research, or treatment of conditions characterised by the expression of various cancer associated antigen precursors expressed in human breast cancer, renal cancer, colon cancer, gastric cancer, prostate cancer and line cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New isolated cancer associated nucleic acids and polypeptides isolated using sera from cancer patients, used to develop products
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 67; Page 485; 787pp; English.
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| aggtggatgaggagggcaagtttgtccggctgcgca 15   | ctagcgggcgcgtggccgtggaggaggt   |      | рb       |
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| aggagaggetacgeetgteeeceageeetacetege 13   | accycaayctcttggagggcgaggagga   |      | Db       |
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| aggacteactggccgtgagcgggacaccagccggc 11    | aggaggcgaagcttcgagacctggagga   | 1081 | В        |
| aggactcactggcccgtgagcgggacaccagccggc 1    | aggaggcgaagcttcgagacctggagga   |      | Qγ       |
| cccagctcagccagctccagaagcagctggcagcca 10   | gcatccgcatcgacagcctctctgccca   |      | В        |
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| tggtggggctgcccacgaggagctgcagcagtcg        | agtotgotgagaggaacagcaacctggtg  | 961  | Оу       |
| agaagacttattctgccaagctggacaat             | tggagcagtataagaaggagctggagaag  | 901  | B        |
| agaagacttattctgccaagctggacaatgccagg       | tggagcagtataagaaggagctggagaag  | 901  | γ        |
| cgctgcaggaactgcgggcccagcatgaggaccagg      | agtttgagagccggctggcggatgcgctg  | 841  | Дb       |
| cąctycaygaactycygygcccaycatyaygaccayg 9   | agtttgagagccggctggcggatgcgctg  | 841  | Qγ       |
| ccgactggtggagattgacaatgggaa               | gtgagaccaagcgccgtcatgagacccga  | 781  | рb       |
| tggtggagattgacaatgggaagcagcgtg            | gtgagaccaagcgccgtcatgagacccga  | 781  | Qy       |
| tggacttccagaagaacatctacagtgaggagct        | ggctgcagaccatgaaggaggaactggac  | 721  | Db       |
| tggacttccagaagaacatctacagtgaggagctg       | ggctgcagaccatgaaggaggaactggac  | 721  | Qy       |
| aggatgagatgctgcggcgggttggatgctgagaaca     | taggtgaggccaagaagcaacttcaggat  | 661  | ф        |
| ggatgagatgctgcggcgggtggatgctgagaaca 7     | taggtgaggccaagaagcaacttcaggat  | 661  | Qy       |
| atctgcggggccaggtggccaagcttgaggcagccc 660  | gcacgctggagggcgagctgcatgatctg  | 601  | Db       |
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                                                                                           The present invention provides the protein and coding sequences of number of human shear stress response proteins. These are useful in disposis, treatment and screening of vascular diseases caused by arteriosclerosis, including heart failure, post-PTCA restenosis and
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                                                                                Sequence 1953 Bp;
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                                                                                                                                                         DNA sequences, proteins encoded by them and antibodies against them useful in diagnosis and treatment of vascular disease caused by
                                       Local Simes 1953;
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Kuga T, Sekine S,
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                                         Score 1953;
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July 27, 2002, 05:48:21; Search time 3956.53 Seconds (without alignments) 1824.303 Million cell updates/sec

Title: Perfect score: Sequence:

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1 acgcaggcagtgatgtcacc.....gagtagtggagtgtcagtgc 4204

Scoring table: IDENTITY\_NUC Gapent 1.0

Searched: 1736436 seqs, 858457221 residues

Total number of hits satisfying chosen parameters: 3472872

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

| Result. | Score<br>4204<br>4204<br>4204<br>4173.6<br>2457<br>2457 | Query<br>Match<br>100.0<br>100.0<br>100.0<br>99.3<br>58.4 | Match Length DB 100.0 4204 21 100.0 4204 31 100.0 4204 31 100.0 4204 31 58.4 4157 21 |     | AAX26974<br>AAA37927<br>AAD18140<br>AAS02056<br>AAQ72478<br>AAX84114 |  |
|---------|---|---|--|-----|--|--|
|         | 4204<br>4204<br>4204                                    | 100.0   | 4204<br>4204<br>4204   | 222 | AAX26974<br>AAA37927<br>AAD18140                                     |  |
|         | #1/3.0  | 99.3  | 4.204  | 22  | AAS02056   |  |
| ٠.      | 2457  | 58.4  | 4157   | 15  | AAQ72478   |  |
| o,      | 2457  | 58.4  | 4157   | 20  | AAX84114   |  |
| 7       | 2455.4  | 58.4  | 4157   | 13  | AAQ32353   |  |
| œ       | 2372.4  | 56.4  | 4523   | 22  | AAD06131   |  |
| 9       | 1762.6  | 41.9  | 5674   | 15  | AAQ72477   |  |

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| 22.3                                 |                    | 24.7     | 25.5     | 27.1     |          |          | 32.1      | 32.1     | 34.2      | 34.2     | 34.3     | 34.3       | 34.3              | 34.3     | 35.4     | 35.6     | 35.6      | •         | 35.6     | •         | 35.8               | •        | •        | ٠                 | 36.1     | 36.1      |           | 36.5        |            | •                 |          |          |           |                   |
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| 13                                   | 22                 | 20       | 21       | 21       | 19       | 20       | 15        | 13       | 13        | 13       | 20       | 15         | 20                | 15       | 20       | 20       | 16        | 15        | 13       | 16        | 20                 | 15       | 13       | 13                | 16       | 15        | 20        | 5           | 22         |                   |          |          | 16        | 20                |
| AAD12993<br>AAQ32356                 | AAF24676           | AAV69719 | AAA64632 | AAD01314 | AAV22716 | AAX84104 | AAQ72485  | AAQ32360 | AAQ32357  | MAQ32358 | AAX84118 | AAQ72482   | AAX84119          | NAQ72483 | AAX84103 | AAX84121 | AAT01165  | AAQ72486  | MAQ32361 | AAT05086  | AAX84112           | AAQ72476 | AAQ32351 | AAQ32355          | AAQ85435 | NA072472  | AAX84116  | AAQ72480    | AAI36453   | AAI15118          | ABA26487 | AAQ32352 | AAQ98902  | AAX84113          |
| Human MAGE-A3 DNA. MAGE-31 gene. Hom | Nucleotide sequenc |          | ncoding  | MAGE-A8  | 6 cDNA.  |          | r rejecti | 5 CDNA.  | d gene. H | 41 gene. |          | r rejectio | MAGE-41 gene. Hom |          | en precu | qene.    |           | rejection | qenomic  | antiqen E | Antigen E coding s | J        |          | MAGE-3 CDNA. Homo | D.       | r rejecti | gene Hom  | r rejection | #5139 used | <b>9</b> 5051 for |          |          | r rejecti | MAGE-1 gene. Homo |

## ALIGNMENTS

AAX26974; AAX26974 standard; cDNA; 4204 BP. cDNA encoding MAGE-3 polypeptide. 25-JUN-1999 (first entry)

MAGE-3 tumour associated gene; human leucocyte antigen Class II; autologous CD4+ cell; MAGE-3 related disease; cancer; melanoma; osteosarcoma; leukemia; carcinoma; ss.

Homo sapiens

(LUDW-) LUDWIG INST CANCER RES. (UYVR-) UNIV VRIJE BRUSSEL. 12-SEP-1997; W09914326-A1 04-SEP-1998; 25-MAR-1999. 97US-0928615. 98MO-0S18601 Location/Qualifiers 2465..3409 /product= "MAGE-3"

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| ototttaanaanaanaanaanaanaanaanaanaanaanaana   | gaaaatotgggaggaggtgtaggggtgtattagagg |      | Qy |
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The present invention relates to MAGE-A3 (tumour associated gene product) human leukocyte antigen (HLA) class II-binding peptides (see AAB02565-B02595, and AAB02633-B02637). These peptides are presented to T cells in the context of HLA class II molecules. The peptides stimulate the activity and proliferation of CD4+ T lymphocytes. The invention also includes nucleotide sequences encoding MAGE-3A peptides (see AAA37928 and AAA37938-A37940). The peptides and nucleotide sequences can be used to create antibodies against the MAGE-A3 peptides, the antibodies, peptides and nucleotide sequences can be used to create a to dispose or treat a disorder characterized by expression of MAGE-3, particularly cancer. The methods can also be used in the diagnosis of disorders associated with MAGE-3 expression. Included
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CC in the invention are other human tumour antigens (see AAB02596-B02637), CC and PCR primers used in the course of the invention (see AAA37929-A37937 CC and AAA37941-A37942). 

XX XX Sequence 4204 BP; 944 A; 1144 C; 1223 G; 893 T; 0 other;
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δÃ Ş 밁 Ş В õ 밁 В Ş 밁 Ş Ş Ş 밁 δÃ 밁 ð 밁 ð 밁 Ş 멍 Q 밁 õ В á B õ 밁 밁 Query Match Best Local Matches Sequence 4204 BP; 661 541 541 481 421 361 361 301 301 241 241 181 121 121 781 721 601 601 481 121 181 721 781 61 Local Similarity cccaactcccccgaccccaggatctacagcctcaggaccccgtcccaatccttacc 999a99act9a99c999cctcacctcagacagagggcctcaaataatccagtgctgcctc tgacttgcgcattggaggtcagaagaccgcgagattctcgccctgagcaacgagcgacgg aatccagttccacccctgcccggaacccagggtagtaccgttgccaggatgtgacgccac aatccagttccacccctgcccggaacccagggtagtaccgttgccaggatgtgacgccac ccttgccccatcaccatcttcatgcttacctccacccccatccgatccccatccaggcag ccttgccccatcaccatcttcatgcttacctccacccccatccgatccccatccaggcag tcagagtcagagacttggtctgaggggagcagaagcaatctgcagaggatggcggtccag acgcaggcagtgatgtcacccagaccacaccccttcccccaatgccacttcagggggtac 4204; tccgggctttgcccctggtatcaagtcacggaagctccgggaatggcggccaggcacgtg cagggcagggctggttagaagaggtcagggcccacgctgtggcaggaatcaaggtcagga accccgccgacccccgccgtttagccacggggaaactctgggggacagagcttaatgtggc tgctgccgggcctgggccaccccqcaggggaagacttccaggctgggtcgccactacctc agtcctgaggttcacatctacggctaagggagggaaggggttcggtatcgccgagtattggc cagggcagggctggttagaagaggtcagggcccacgctgtggcaggaatcaaggtcagga accccgccgacccccgccgctttagccacggggaactctggggacagagcttaatgtggc tgctgccgggcctgggccaccccgcaggggaagacttccaggctgggtcgccactacctc 999a99actgaggcgggcctcacctcagacagagggcctcaaataatccagtgctgcctc cctgacgtcggcggagggaagccggcccaggctcggtgaggaggcaaggtaagacgctga tccgggctttgcccctggtatcaagtcacggaagctccgggaatggcggccaggcacgtg cacccaaccccacccccatccccattcccatccccacccccacccctatcctggcagaa Conservative 944 100.0%; A; 1144 C; 0 Score 4204; Pred. No. 0 Mismatches 1223 ဂ္ 0, 893 T; 21; 0 0 Indels other; Length 0 480 420 420 360 360 300 300 180 180 60 60 840 600 540 660 660 600 900 720 0,

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H.sapiens mRNA for SSX2 protein.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
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Crew,A.J., Clark,J., Fisher,C., Gill,S., Grimer,R., C
          Shipley,J.,
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Direct Submission
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/db_xref="taxon:9606"
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Hodgkin's disease associated molecules
Patent: US 5840558-A 2 24-NOV-1998;
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